CLAIMS:

1. A method of forming seals in a fuel cell assembly by injecting a sealing material into a groove network within the fuel cell assembly, the method including injecting a curable seal material containing:

(a) 100 parts by weight of a polydiorganosiloxane containing two or more silicon-atom-bonded alkenyl groups in each molecule;

(b) 5-50 parts by weight of a reinforcing filler;

(c) 1-20 parts by weight of an oxide or hydroxide of an alkaline earth metal with an atomic weight of 40 or greater;

(d) an organohydrogensiloxane containing three or more silicon-atom-bonded hydrogen atoms in each molecule, the hydrogen atoms being present in an amount providing a molar ratio of silicon-atom-bonded hydrogen atoms in component (d) to silicon-atom-bonded alkenyl groups in component (a) which is in a range of 0.4:1 to 5:1; and

(e) a platinum-type metal catalyst in an amount providing 0.1-500 parts by weight of platinum-type metal per one million parts by weight of component (a).

2. A method as claimed in claim 1, wherein the seal material further comprises:

(a) 0.1-5.0 parts by weight of an organic peroxide in combination with component (e) or in place of component (e);

(b) 0.01–5.0 parts by weight of an inhibitor; and

(c) 0.01-100 parts by weight of a non-reinforcing extending filler.

3. A method as claimed in claim 1, in which the polydiorganosiloxane of component (a) is a vinyl terminated polydimethylsiloxane having a viscosity of at least 55 Pa.s (55,000 cP) or a blend of lower and higher viscosity vinyl containing polydimethylsiloxanes such that the viscosity of the blend is at least 55 Pa.s (55,000 cP).

4. A method as claimed in claim 3, wherein component (a) is a vinyl terminated trifluoropropylmethylsiloxane dimethylsiloxane copolymer in which the mole percent of methyltrifluoropropyl is 10-100 mole percent.

5. A method as claimed in claim 1, wherein component (a) is a vinyl terminated diphenylsiloxane dimethylsiloxane copolymer in which the mole percent of diphenylsiloxane is 2-50 mole percent.

6. A method as claimed in claim 1, in which component (e) is encapsulated in a thermoplastic organic polymer.

7. A method as claimed in claim 1, in which component (e) is present in an amount to provide 5-50 parts by weight of platinum type metal per one million parts by weight of component (a), and the composition is cured by heating it to a temperature of 30-120 °C.

8. A method as claimed in claim 1, in which component (e) is an organic peroxide, instead of the metal catalyst, present in an amount of 0.5-5.0 parts per 100 parts of the composition, and the composition is cured by heating it to a temperature of 100-200 °C.

9. A method as claimed in claim 1, in which the curable composition further comprises:

(f) 0.1-20 parts by weight of an adhesion promoter which is an epoxy containing organosilicon compound, the adhesion promoter being added to the composition before it is cured to improve bonding of the composition during cure.

10. A method as claimed in claim 2, in which the viscosity of the curable composition is 1,000-1,500 Pa.s (100,000-150,000 cp).